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EXAMINER
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ALEJANDRO, RAYMOND

ART UNIT	PAPER NUMBER
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1745

MAIL DATE	DELIVERY MODE
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07/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



**DETAILED ACTION**

**In response to the petition decision of 06/04/07, please note the following office action:**

***Election/Restrictions***

1. Applicant's election with traverse of Group I and Species 2 (claims 1, 32-46, 56-78 and 88-94) in the reply filed on 05/14/07 is acknowledged. The traversal is on the ground(s) that "*the Group II claims 49-55 and 81-87 can be examined with the Group I claims since the Group II claims depend from independent claims 1 or 63 of the Group I claims*". This is not found persuasive because the restriction requirement dated 06/21/06 set out two separate and distinct inventions identified as Group I (claims 1, 32-48, 56-62, 63-80 and 8-94) directed to fuel cells per se classified in class 429/34 and Group II (claims 49-55 and 81-87) directed to composite block of fuel cells classified in class 429/12.

In establishing the burden, the examiner relies first on the definition of distinct or independent inventions by virtue of the relationship between Group I and Group II, which were identified to be related as combination and subcombination in the restriction requirement dated 06/21/06 (refer to that action); and second by the guidelines established in ***MPEP 808.02 [R-3]*** ***Establishing Burden*** setting forth that serious burden is present if at least one of following criteria is met: A) each invention has attained recognition in the art as a separate subject for inventive effort, and also a separate field of search (***Separate classification thereof***); and/or B) it is necessary to search for one of the inventions in a manner that is not likely to result in finding art pertinent to the other invention(s) (e.g., searching different classes /subclasses or electronic resources, or employing different search queries, a different field of search is shown, even though the two are classified together (***A different field of search***); and/or C) each invention can

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be shown to have formed a separate subject for inventive effort when the examiner can show a recognition of separate inventive effort by inventors, this can be established by at least showing a separate field of search (*A separate status in the art when they are classifiable together*). In the instant case, Group I and II meet at least criteria A) and B) above for the reasons expressed supra.

The requirement is still deemed proper and is therefore made **FINAL**.

***Priority***

2. This application is a continuation of Application No. 09/658628, filed 09/11/2000.
3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/658628, filed on 09/11/2000.

***Information Disclosure Statement***

4. The information disclosure statements (IDS) submitted on 04/23/04 and 08/10/05 were considered by the examiner.

***Drawings***

5. The drawings were received on 09/29/03. These drawings are acceptable.

***Specification***

6. The preliminary amendment filed 09/29/03 does not introduce new matter into the disclosure.
7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

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8. The disclosure is objected to because of the following informalities: the current status of the parent application (whether abandoned or patented and its patent) must be updated.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 57 and 89 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 57 and 89 are indefinite as they depend from non-elected claims 48 and 80, respectively. Thus, their specific scope is uncertain.

***Double Patenting***

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1, 32-46, 56-78 and 88-94 are rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 1-19 and 32-36 of U.S.

Patent No. 6670068. Although the conflicting claims are not identical, they are not patentably

distinct from each other because of the following reasons:

The US patent '068 claims the following (Claims 1-19 and 32-36):

- 10 1. Fuel cell unit, comprising: a cathode-anode-electrolyte unit, a contact plate in electrically conductive contact with the cathode-anode-electrolyte unit, and a fluid guiding element being formed as a shaped sheet metal part and connected to the contact plate in a fluid-tight manner by way of  
15 welding or by way of soldering, the fluid guiding element and the contact plate defining therebetween a fluid chamber having a combustible gas or an oxidation agent flowing through it during operation of the fuel cell unit.
2. Fuel cell unit as defined in claim 1, wherein the  
20 cathode-anode-electrolyte unit is arranged on the fluid guiding element.
3. Fuel cell unit as defined in claim 1, wherein the contact plate is designed as a shaped sheet metal part.
4. Fuel cell unit as defined in claim 1, wherein the fluid  
25 guiding element and the contact plate are connected to one another by laser welding or by electron beam welding or by hard soldering.
5. Fuel cell unit as defined in claim 1, wherein the fluid guiding element has an opening for the passage of contact  
30 elements to the cathode-anode-electrolyte unit.
6. Fuel cell unit as defined in claim 1, wherein the fluid guiding element abuts on the cathode-anode-electrolyte unit via an electrically insulating seal.
7. Fuel cell unit as defined in claim 6, wherein the seal  
35 comprises mica.
8. Fuel cell unit as defined in claim 6, wherein the seal comprises a flat seal.
9. Fuel cell unit as defined in claim 6, wherein the seal comprises a coating on at least one of the fluid guiding  
40 element and the cathode-anode-electrolyte unit.
10. Fuel cell unit as defined in claim 1, wherein the cathode-anode-electrolyte unit and the fluid guiding element are biased elastically against one another.

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11. Fuel cell unit as defined in claim 1, wherein the fluid  
5 guiding element is provided with at least one fluid port.

12. Fuel cell unit as defined in claim 11, wherein the fluid  
guiding element is provided with a fluid supply channel  
opening and with a fluid discharge channel opening.

13. Fuel cell unit as defined in claim 1, wherein the fuel  
0 cell unit comprises an electrically insulating fluid channel  
seal, the contact plate of the fuel cell unit abutting on the  
fluid guiding element of an adjacent fuel cell unit via said  
seal.

14. Fuel cell unit as defined in claim 1, wherein the fuel  
5 cell unit comprises a fluid channel seal, the fluid guiding  
element of the fuel cell unit abutting on the contact plate of  
an adjacent fuel cell unit via said seal.

15. Fuel cell unit as defined in claim 14, wherein the fluid  
channel seal comprises a coating on at least one of the fluid  
0 guiding element and the contact plate.

16. Fuel cell unit as defined in claim 14, wherein the fluid  
channel seal comprises a flat seal.

17. Fuel cell unit as defined in claim 14, wherein the fluid  
channel seal comprises at least two separate sealing ele-  
5 ments.

18. Fuel cell unit as defined in claim 14, wherein the fluid  
channel seal comprises a slide fit sealing.

19. Fuel cell unit as defined in claim 14, wherein the fluid  
channel seal comprises a material viscous at the operating  
temperature of the fuel cell unit.

20 32. Fuel cell unit as defined in claim 2, wherein the  
cathode-anode-electrolyte unit is held between the fluid  
guiding element and the contact plate.

33. Fuel cell unit as defined in claim 19, wherein the fluid  
channel seal comprises a solder glass.

25 34. Fuel cell unit, comprising: a cathode-anode-  
electrolyte unit, a contact plate in electrically conductive  
contact with the cathode-anode-electrolyte unit, and a fluid  
guiding element being formed as a shaped sheet metal part  
and connected to the contact plate in a fluid-tight manner,  
30 said fluid guiding element and said contact plate forming a  
two-part shell surrounding said cathode-anode-electrolyte  
unit of the fuel cell unit.

35. Fuel cell unit, comprising: a cathode-anode-  
electrolyte unit, a contact plate in electrically conductive  
5 contact with the cathode-anode-electrolyte unit, a fluid guid-  
ing element being formed as a shaped sheet metal part and  
connected to the contact plate in a fluid-tight manner, and an  
electrically insulating fluid channel seal arranged between  
the contact plate of the fuel cell unit and the fluid guiding  
3 element of an adjacent fuel cell unit or between the fluid  
guiding element of the fuel cell unit and the contact plate of  
an adjacent fuel cell unit, said fluid channel seal surrounding  
a fluid port provided in the fluid guiding element or a fluid  
port provided in the contact plate and said fluid channel seal  
being spaced apart from the electrolyte of the cathode-  
5 anode-electrolyte unit of the fuel cell unit.

36. Fuel cell unit, comprising: a cathode-anode-  
electrolyte unit, a contact plate in electrically conductive  
contact with the cathode-anode-electrolyte unit, and a fluid  
guiding element being formed as a shaped sheet metal part  
3 and connected to the contact plate in a fluid-tight manner,  
said fluid guiding element forming a boundary of a fluid  
chamber having fluid flowing through it during operation of  
the fuel cell unit and abutting on the cathode-anode-  
electrolyte unit via an electrically insulating seal.

In this case, the specific combination of claims 1 and 11 of the patent'068 fully anticipates and encompasses the claimed subject matter. Thus, such a combination represents an obvious variant or modification of the invention of patent'068.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 32-36, 38-46, 56, 58-68, 70-78, 88 and 90-94 are rejected under 35

U.S.C. 102(b) as being anticipated by Isobe et al 4242099.

The present invention concerns a fuel cell unit wherein the disclosed inventive concept comprises the specifics of the fluid guiding element.

With respect to claims 1 and 63:

Isobe et al disclose a fuel cell comprising a plurality of unit cells stacked in layers, each adapted to receive two kinds of gases to generate electrical power (CLAIM 1/ABSTRACT). Each fuel cell unit are formed of a porous anode 2, a porous cathode 3 and an electrolyte 4 interposed between the anode 2 and the cathode 3. Unit cells 1 are stacked in layers, and a plurality of conductive separators elements 5 are interposed therebetween (Col 3, lines 25-34).

**Figures 3-4** reproduced below illustrate the fuel cell configuration including a plurality of additional elements 5 (the separator element), 40 (adjacent seal member), 42-43 (metal members), 44 (insulating member) (See COL 4, lines 7-18), and segment channels 41 (See COL



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3, lines 65-68) resembling substantially the same claimed structure including a fluid gas intake manifold 20 (*the fluid guiding area*) including an opening (*the port*) to which the anode 2-cathode 3-electrolyte 4 does not extend and the fluid gas intake manifold 20 extend through the stacked unit cells 1 (See Applicant's attention is drawn to FIGURES 3-4). Isobe et al disclose the members 42, 43 are shaped metal members (COL 4, lines 7-10).

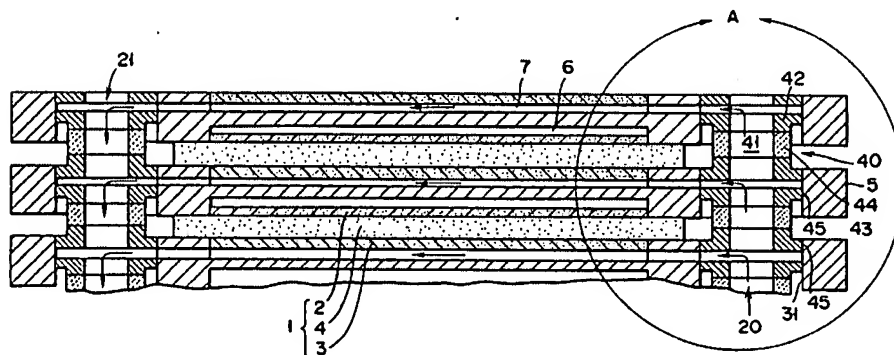


FIG. 3

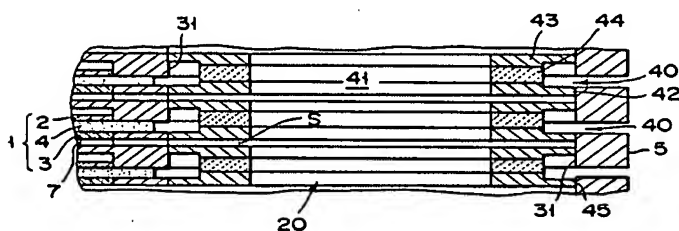


FIG. 4

With respect to claims 32, 40, 64, 72 and 88:

Fuel cell unit 1 comprising the anode 2-cathode 3-electrolyte 4 are arranged on the fluid gas intake manifold 20 extending through the stacked unit cells 1 (*the fluid guiding element*) (See FIGURES 3-4). *Thus, they are also biased against each other.*

With respect to claims 33, 65 and 89:

Isobe et al disclose the members 42, 43 are shaped metal members (COL 4, lines 7-10).

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With respect to claims 34, 61, 66, 90 and 93:

Isobe et al employ welding, brazing and ceramic bonding to join the above-mentioned features (CLAIM 14-16).

*Additionally, as to the method limitation, (i.e. connected by laser welding or hard soldering), it is noted that a method limitation incorporated into a product claim does not patentable distinguish the product because what is given patentably consideration is the product itself and not the manner in which the product was made. Therefore, the patentability of a product is independent of how it was made. As a result, the process steps of a product-by-process claim do not impart any significant property or structure to the claimed end product. And, if there is any different, the difference would have been minor and obvious.*

*Determination of patentability of a product-by-process claim is based on the scope of the product itself.*

*“[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”*

*In re Thorpe 777 F.2d 695, 698, 227 USPQ 964,966 (Fed Cir. 1985) and MPEP 2113.*

With respect to claims 35, 41, 62, 67, 73 and 94:

Isobe et al discuss the inclusion of the oxidant gas (fluid) gas intake manifold 20 (*the fluid guiding area*) including an opening (*the port*) extend through the stacked unit cells 1 comprising the anode 2-cathode 3-electrolyte 4 (Col 3, lines 45-60). Reference numeral 21 which is part of the fluid guiding element as disclosed by Isobe et al also comprises an exhaust manifold 21 (*the fluid discharge channel opening*) (Col 3, lines 59-61 & FIGURE 3)

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With respect to claims 36, 38, 45, 56, 68, 70 and 77:

Isobe et al's invention includes fuel cell unit 1 comprising the anode 2-cathode 3-electrolyte 4 are arranged on the fluid gas intake manifold 20 extending through the stacked unit cells 1 (the fluid guiding element) (See FIGURES 3-4); and the insulating member 44 which is part of the seal arrangement (See COL 4, lines 7-18) and is of flat shape (CLAIM 18 and FIGURE 3-4). *The anode 2-cathode 3-electrolyte 4 and the insulating member 44 are in operatively connection. Fuel cell unit 1 are also held therebetween.*

With respect to claims 39, 42-44, 71 and 74-76:

Isobe et al disclose that the insulating member 44 which is part of the seal arrangement has a composite material layer thereon which is a multistage layer (CLAIMS 33-34 & See COL 4, lines 7-18). Isobe et al teach that each seal member 40 is formed of two ring-shaped metal members 42-43, and ring-shaped insulating member 44 interposed therebetween (See COL 4, lines 7-18). *Thus, the seal member 40 as a whole abut on the contact areas of the adjacent fuel cells regardless of its specific spatial orientation* (See FIGURES 3-4).

With respect to claims 46, 58 and 78:

Isobe et al disclose each seal member 40 is formed of two ring-shaped metal members 42-43, and ring-shaped insulating member 44 interposed therebetween (See COL 4, lines 7-18). *Each member is taken as a separate sealing element forming the entirety of the seal member 40.*

With respect to claims 59-60 and 91-92:

Isobe et al's invention includes fuel cell unit 1 comprising the anode 2-cathode 3-electrolyte 4 are arranged on the fluid gas intake manifold 20 extending through the stacked unit cells 1 (the fluid guiding element) (See FIGURES 3-4); and the insulating member 44 which is

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part of the seal arrangement (See COL 4, lines 7-18) and is of flat shape (CLAIM 18 and FIGURE 3-4). *The anode 2-cathode 3-electrolyte 4 and the insulating member 44 are in operative connection. Fuel cell unit 1 are also held therebetween.*

Isobe et al disclose that the insulating member 44 which is part of the seal arrangement has a composite material layer thereon which is a multistage layer (CLAIMS 33-34 & See COL 4, lines 7-18). Isobe et al teach that each seal member 40 is formed of two ring-shaped metal members 42-43, and ring-shaped insulating member 44 interposed therebetween (See COL 4, lines 7-18). *Thus, the seal member 40 as a whole abut on the contact areas of the adjacent fuel cells regardless of its specific spatial orientation* (See FIGURES 3-4).

Thus, the present claims are fully anticipated.

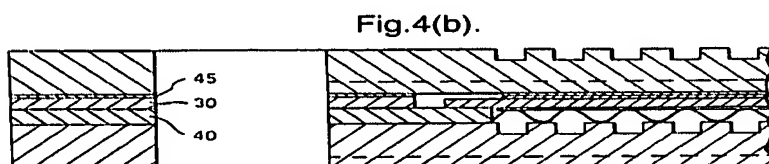
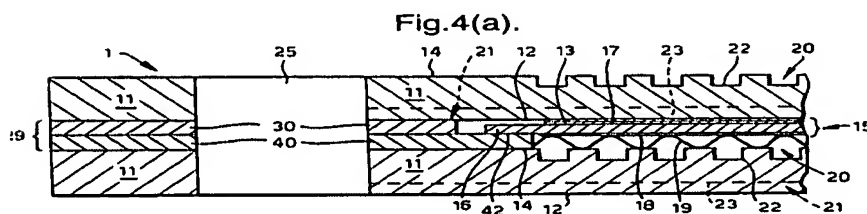
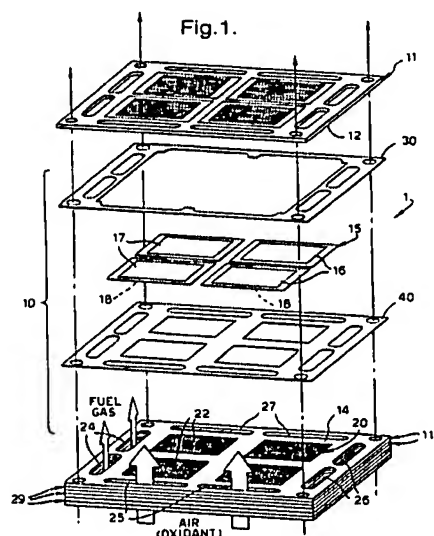
15. (at least) Claims 1 and 63 are rejected under 35 U.S.C. 102 (a) as being anticipated by the WO publication WO 99/54131 (herein called the WO'131).

The WO'131 discloses sealing arrangements for fuel cells (TITLE) wherein the fuel cell includes a cell assembly including cathode elements 17, cathode contacting surfaces 12, anode elements 18 and anode contacting faces 14 (page 8, lines 19-24) and electrolytes (page 8, lines 30-31). Adjacent separator plates 11 are also included (page 8, lines 19-24). Each separator plate 11 is formed with a gas flow channel arrangement 20, 21 formed thereon (page 9, lines 8-13). Separator plates are shaped metal or metallic members (page 1, lines 9-13).

**Figure 1** illustrates a fuel cell unit comprising cathode 17, anode 18 and electrolytes and including a shaped metal part connected to the fuel cell unit; and **Figures 4a-b** further illustrate the structure wherein the shaped metal plates (the separator 11) includes an aperture (page 9,

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lines 20-25) (*which serves as the fluid guiding element*) through the plates which extends through the fuel cell assembly as shown in **FIGURES 4a-b** so that when the stack of cells is assembled they form passages for fuel gas to reach channels 22, passages for oxidant gas to reach channel 23, passages for the exhaust of spent and unused fuel gas and passages for the exhaust of spent and unused oxidant gas (page 9, lines 20-24).



Thus, the present claims are anticipated.

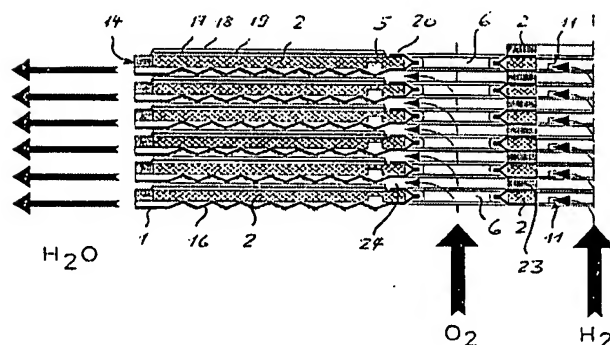
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16. (at least) Claims 1 and 63 are rejected under 35 U.S.C. 102 (a) as being clearly anticipated by the WO publication WO 98/35398 (herein called the WO'398).

The WO'398 discloses a fuel cell stack with solid electrolyte and its arrangement (TITLE) wherein the fuel cell includes a cathode layer 18, and an anode layer 19 and ion conducting electrolyte 17 (ABSTRACT). The fuel cell has an aperture (the fluid guiding element) for the intake of a first gas (ABSTRACT). There is provided a gas permeable carrier 2 having ducts for the passage of gases, a separator plate 20 of which at least part lies on the carrier; and another separator plate 1 also lie on the carrier and comprises means which guide the gases in a targeted manner and co-operate with the ducts of the carrier (ABSTRACT). Separator plates are conductive metallic materials (page 8, lines 24-30/page 12, lines 28-36). *Either separator plate 20 or separator plate 1 serves as the fluid guiding element, especially separator 20 is in fluid-tight contact with the anode-electrolyte-cathode assembly.*

**Figure 2** illustrates a fuel cell configuration including the above-mentioned members and also including an aperture 6 for the oxidant gas through the fuel cell assembly:

*Fig. 2*



Thus, the present claims are fully-clearly anticipated.

*Claim Rejections - 35 USC § 103*

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. Claims 37 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isobe et al 4242099 as applied to claims 36 and 68 above, and further in view Ghosh et al 2002/0024185.

Isobe et al is applied, argued and incorporated herein for the reasons manifested above.

However, the preceding reference fails to expressly disclose the specific mica seal.

Ghosh et al disclose that it is known to use seals made of mica as they are able to withstand high temperatures while keeping adequate sealing characteristics and flexibility (P0004/ABSTRACT). Those seals are particularly useful in solid oxide fuel cells (P0001/ABSTRACT).

By compounding these teachings, it would have been obvious to a person possessing a level of ordinary skill in the pertinent art at the time the invention was made to use the specific mica seal of Ghosh et al in the fuel cell system of Isobe et al as Ghosh et al discloses that mica

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seals are able to withstand high temperatures while keeping adequate sealing characteristics and flexibility in fuel cells (P0004/ABSTRACT).

20. Claims 37 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isobe et al 4242099 as applied to claims 36 and 68 above, and further in view Virkar et al 6106967.

Isobe et al is applied, argued and incorporated herein for the reasons manifested above. However, the preceding reference fails to expressly disclose the specific mica seal.

Virkar et al disclose that it is known to use mica seals as seals to secure fuel cell stacks inside a metallic component and in order to improve sealing (COL 4, lines 50-60). The fuel cell stack comprises a plurality of integral component fuel cell units, each integral fuel cell unit including respective anode, cathode and electrolyte (ABSTRACT).

By compounding these teachings, it would have been obvious to a person possessing a level of ordinary skill in the pertinent art at the time the invention was made to use the specific mica seal of Virkar et al in the fuel cell system of Isobe et al as Virkar et al discloses that mica seals are able to secure fuel cell stacks inside a metallic component and improve sealing (COL 4, lines 50-60).

21. Claims 57 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isobe et al 4242099 as applied to the foregoing claims above, and further in view of Applicant's Admission of Prior Art (heretofore the AAPA) (*Applicant's specification at page 7, 2<sup>nd</sup> full paragraph*).



Isobe et al is applied, argued and incorporated herein for the reasons manifested above.

However, the preceding reference fails to expressly disclose the specific solder glass seal.

The AAPA discloses that solder glass can be used as a sealing medium in fuel cells (*Applicant's specification at page 7, 2<sup>nd</sup> full paragraph*).

By compounding these teachings, it would have been obvious to a person possessing a level of ordinary skill in the pertinent art at the time the invention was made to use the specific solder glass seal of the AAPA in the fuel cell system of Isobe et al as the AAPA discloses that it is known in the art to use solder glass as a sealing medium for fuel cells because it is chemically resistant, gas-tight and electrically insulating at the operating temperature of the fuel cell. Thus, solder glass material can be considering, in particular, for the sealing.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Raymond Alejandro  
Primary Examiner  
Art Unit 1745



RAYMOND ALEJANDRO  
PRIMARY EXAMINER